

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of

Atty. Docket

JEAN GOBERT

PHF 99-614

SERIAL NO.:

GROUP ART UNIT:

FILED: CONCURRENTLY

EXAMINER:

REALIZATION OF AN ARBITRARY TRANSFER FUNCTION

Commissioner for Patents  
Washington, D.C. 20231

Sir:

PRELIMINARY AMENDMENT

Prior to calculating the filing fee and examination,  
please amend the above-identified application as follows:

IN THE SPECIFICATION

Page 1, before line 1, insert as a centered heading

--BACKGROUND OF THE INVENTION--;

line 1, delete in its entirety, and insert at the left  
margin --Field Of The Invention--;

line 7, delete in its entirety, and insert at the left  
margin --Description Of The Related Art--;

line 10, change "X the" to --X, the--;

line 15, after "bits" insert --,-- (comma);

line 17, after "bits" insert --,-- (comma);

line 21, change "therefore" to --, therefore,--;

line 25, center the heading;

Page 2, line 12, after "high" insert --,-- (comma);

line 23, after "i.e." insert --,-- (comma);

line 25, after "case" insert --,-- (comma);

line 30, after "derives" insert --,-- (comma);

change "value a" to --value, a--;

Page 3, line 12, after "interval" insert --,-- (comma);

line 14, after "invention" insert --,-- (comma);

line 26, center the heading;

line 28, change "invention as defined in the first Claim;"  
to --invention;--;

line 30, change "invention." to --invention;--;

Page 4, line 4, delete in its entirety, and insert as a centered  
heading

--DESCRIPTION OF THE PREFERRED EMBODIMENTS--;

line 7, after "case" insert --,-- (comma);

line 8, delete "This applies";

line 9, delete in its entirety;

line 12, after "derives" insert --,-- (comma);

after "X" insert --,-- (comma);

line 33, after "example" insert --,-- (comma);

Page 6, line 14, after "ADR" insert --,-- (comma);

line 20, after "0" insert --,-- (comma);

line 22, after "1" insert --,-- (comma);

Page 7, line 15, after "I1" insert --,-- (comma);  
line 17, after "I1" insert --,-- (comma).

IN THE ABSTRACT

Page 11, before line 1, delete in its entirety, and insert as a  
centered heading

--ABSTRACT OF THE DISCLOSURE--;

line 9 should be a continuation of line 8;

lines 9 and 12, change "comprises" to --includes--;

line 16, after "(IND)." insert --The device enables a  
satisfactory accuracy of the output value to  
be obtained while the table is of a moderate  
size.--;

after line 16, delete in its entirety.

IN THE CLAIMS

Please amend the claims as follows:

1. (Amended) An image processing system comprising a gamma correction circuit for supplying an output value [(Y)] in response to an input value [(X)] in accordance with a gamma correction function [(F):  $Y = F(X)$ ], [which] said gamma correction circuit

5 [comprises] comprising:

[-] an input section [(INP)] for deriving a table input value [(XT)] and an interpolator input value [(XI)] from the input value [(X)];

[-] a table [(TBL)] for supplying a table value [(YT)] in  
 10 response to the table input value [(XT)];

[-] an interpolator [(INT)] for supplying an interpolation value [(YI)] in response to the interpolator input value [(YI)];

and

[-] an output section [(OUT)] for combining the table value  
 15 [(YT)] and the interpolation value [(YI)] so as] to obtain the output value [(Y)],

characterized in that the input section [(INP)] of the device comprises:

[-] an interval detector [(DET)] which defines] for defining a  
 20 plurality of input value intervals [(I1, I2)], and for supplying an interval indication [(IND)] which indicates] indicating the interval [(I1, I2) in which] containing the input value [(X)] lies];

[-] an input value former [(IVC)] for forming the table input value [(XT)] and the interpolator input value [(XI)] as a function of the interval indication [(IND)], the table input value [(XT)] and the interpolator input value [(XI)] being determined, respectively, by a more significant part [(MSP)] of the input value and the complementary less significant part [(LSP)] of variable magnitudes in accordance with the interval indication [(IND)].

2. (Amended) A method of supplying an output value [(Y)] in response to an input value [(X)] in accordance with a given function [(F):  $Y = F(X)$ ], [which] said method [comprises] comprising the [following] steps:

[-] deriving a table input value [(XT)] and an interpolator input value [(XI)] from the input value [(X)];

[-] effecting a look-up operation in a table [(TBL)] on the basis of the table input value [(XT) in order] to obtain a table value [(YT)];

10 [-] carrying out an interpolation [(INT)] on the [basis of] the interpolator input value [(XI) in order] to obtain an interpolation value [(YI)]; and

[-] combining [(OUT)] the table value [(YT)] and the interpolation value [(YI) in order to] obtain the output value

15 [(Y)],

characterized in that the method further comprises the [following] steps:

[-] detecting, [(DET)] among a plurality of input value intervals, [(I1, I2)] the interval [(I1, I2) in which] containing the input value [(X) lies];

[-] forming [(IVC)] the table input value [(XT)] and the interpolator input value [(XI)] as a function of the interval [(I1, I2) in which] containing the input value [(X) lies], the table input value [(XT)] and the interpolator input value [(XI)] being determined, respectively, by a more significant part [(MSP)] of the input value and the complementary less significant part [(LSP)] of variable magnitudes in accordance with the interval [(I1, I2) in which] containing the input value [(X) lies].

3. (Amended) A device for supplying an output value [(Y)] in response to an input value [(X)] in accordance with a given function [(F):  $Y = F(X)$ ], [which] said device [comprises] comprising:

[-] an input section [(INP)] for deriving a table input value [(XT)] and an interpolator input value [(XI)] from the input value [(X)];

[-] a table [(TBL)] for supplying a table value [(YT)] in response to the table input value [(XT)];

10 [-] an interpolator [(INT)] for supplying an interpolation  
value [(YI)] in response to the interpolator input value [(YI)];  
and  
[-] an output section [(OUT)] for combining the table value  
[(YT)] and the interpolation value [(YI)] so as to obtain the  
15 output value (Y),  
characterized in that the input section [(INP)] of the device  
comprises:  
[-] an interval detector [(DET)] which defines for defining a  
plurality of input value intervals [(I1, I2)], and for supplying an  
20 interval indication [(IND)] which indicates indicating the interval  
[(I1, I2)] in which containing the input value [(X)] lies];  
[-] an input value former [(IVC)] for forming the table input  
value [(XT)] and the interpolator input value [(XI)] as a function  
of the interval indication [(IND)], the table input value [(XT)]  
25 and the interpolator input value [(XI)] being determined,  
respectively, by a more significant part [(MSP)] of the input value  
and the complementary less significant part [(LSP)] of variable  
magnitudes in accordance with the interval indication [(IND)].

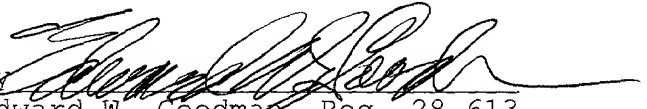
REMARKS

The specification has been amended in various places to correct typographical and grammatical errors.

The claims have been amended to more clearly define the invention as disclosed in the written description. In particular, the claims have been amended for clarity.

When the Examiner takes this case up for examination, it is respectfully requested that this Preliminary Amendment be taken into consideration.

Respectfully submitted,

by   
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